

## REMARKS

Applicants thank the Examiner for the Office Action of October 1, 2008. This Amendment is in full response thereto. Thus, Applicants respectfully request continued examination and allowance of the application.

As a preliminary note, Applicant kindly notes that claims 1-15 were canceled by preliminary amendment. As such, only claims 16-30 are pending in this application.

## Drawings

In the Office Action, the Examiner objected to the Drawings because reference character 5 was used to refer to both the right-hand and left-hand orifices. Applicant has contemporaneously submitted a Replacement Sheet in which the reference character leading to right-hand orifice has been amended from 5 to 6. With reference to the Examiner's reference to hand-written drawings, Applicant kindly notes that the instant FIG is not actually hand-written. Rather, the reference characters  $\ell_{11}$ ,  $\ell_{12}$ ,  $\ell_{21}$ ,  $\ell_{22}$ ,  $\ell_{23}$ ,  $\ell_{24}$ ,  $\ell_{25}$ ,  $\ell_{26}$  are printed in a cursive computer font.

As such, the objection should be withdrawn.

## Specification

The Examiner also objected to the Specification as incorrectly reciting orifices 5 and 6 at line 3 of page 8. Applicant has amended the Specification to correctly recite orifices 3 and 4. As such the objection should be withdrawn.

## Claim Rejections Under 35 U.S.C. § 103:

Claims 16-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dugue, et al. (USPN 6,910,879) in view of Khinkis (USPN 4,761,132).

Claims 27-28 have been canceled thereby mooted the rejection as to these claims.

With respect to claims 16-24, Applicant respectfully traverses because Dugue, et al. fails to disclose, teach or suggest all of the limitations of the claims and the Examiner fails to show where Khinkis or other prior art of record cures the deficiencies of Dugue. More specifically, Dugue, et al. fails to disclose, teach or suggest a first jet of oxygen-rich oxygenated gas, a second jet of oxygen-rich oxygenated gas injected at a distance  $\ell_1$  from the jet of fuel, and an oxygen-lean oxygenated gas is injected at a distance  $\ell_2$  from the jet of fuel. While Dugue, et al, discloses various types of secondary oxidizer, and discloses embodiments in which the primary and secondary oxidizers are the same, it does not disclose the above combination of oxygen-rich oxygenated first jet, oxygen-rich, oxygenated second jet injected at distance  $\ell_1$  from the jet of fuel, and oxygen-lean oxygenated gas injected at distance  $\ell_2$  from the jet of fuel. With regard to the Examiner's statement of motivation, the Khinkis definition of oxygen-rich (and by putative inference oxygen-lean) oxidizers does not teach modifying the Dugue, et al. disclosure to require different levels of oxygen as between the first and second jets of oxygen-rich oxygenated gas on one hand and the oxygen-lean oxygenated gas on the other hand.

With particular regard to claim 20, Applicant respectfully asserts that Dugue, et al. fails to disclose, teach, or suggest the combination of specifically recited distances.

With particular regard to claim 22, the Examiner's suggestion that patentability depends upon a showing of critically is misplaced as the Examiner has not shown why one of ordinary skill in the art would have been motivated to adjust the equivalent circular area of the Dugue injector 26 based upon the dissimilar structure of US 3,729,285. Applicant kindly points out to the Examiner that the Examiner has the burden of there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR International Co. v. Teleflex Inc., et al.*, 550 U.S. 398, at \_\_\_\_; 82 U.S.P.Q.2D (BNA) 1385, at \_\_\_\_.

With respect to claims 25-26 and 29-30, Applicant respectfully traverses because Dugue, et al. and Khinkis, alone or in combination, fail to disclose, teach, or suggest the claims as amended, namely: a separate-injection burner assembly consisting of a third block surrounded, in order, on each side by a first block and a second block, in which:

- a) the first block has a fuel injection orifice and at least two oxygenated-gas injection orifices, the first oxygenated-gas injection orifice being placed so as to be in contact with the fuel injection orifice, the second oxygenated-gas injection orifice being placed at a distance  $\ell_1$  from the fuel injection orifice;
- b) the second block has at least third and fourth oxygenated-gas injection orifices, each placed at a distance  $\ell_2$  from the fuel injection orifice of the first block,  $\ell_2$  being greater than  $\ell_1$  and the fourth oxygenated-gas injection orifice having an area of between 4 and 100 times the area of the third orifice; and
- c) the third block has a fifth oxygenated-gas injection orifice placed at a distance  $\ell_2$  from the fuel injection orifice and having an area of between 4 and 100 times the area of the third injection orifice.

With respect to the Examiner's statement regarding "mere duplication of parts", Applicant has not merely duplicated parts. Rather, Applicant has specifically recited a third block surrounded on each side by a first block and a second block. The Examiner will notice that the third block is not identical to either of the first and second blocks. Thus, the rejection should be withdrawn.

## CONCLUSION

Accordingly, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the examiner believe a telephone call would expedite the prosecution of the application, he/she is invited to call the undersigned attorney at the number listed below.

Applicant has contemporaneously submitted a Petition for a Three Month Extension of Time along with the associated fee. Otherwise, it is believed that no other fee is due at this time. If that belief is incorrect, please debit deposit account number 01-1375. Also, the Commissioner is authorized to credit any overpayment to deposit account number 01-1375.

Respectfully submitted,

Date: **April 1, 2009**

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